

Serial No.: 10/611,366
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Remarks/Arguments

The Office Action raised no objections to the specification. Applicants have, however, presented certain replacement paragraphs to address some non-substantive clerical or administrative deficiencies and respectfully request acceptance thereof.

The Office Action dated 9/8/2004 rejected claims 1-6, 10-18 and 22-25 under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 6062189 to Kaneko et al. (Kaneko et al.). The Office Action further rejected all remaining claims 7-9, 19-21 and 26-28 under 35 U.S.C. 103(a) as being unpatentable over Kaneko et al. in view of Applicants specification BACKGROUND paragraph [0009].

Kaneko et al. disclose a spark ignited internal combustion engine implementing a divisional fuel injection mode. More specifically, under intermediate to high loads, an intake stroke injection and a compression stroke injection which together comprise a total injection. The total injection is rich of stoichiometric (e.g. air/fuel ratio about 12) whereas the intake stroke injection is lean to avoid self-ignition. The compression stroke injection is performed in a manner also to avoid self-ignition. And, ignition is provided by a spark plug. Various other single injection modes are disclosed.

In stark contrast, the present invention is directed toward a controlled auto-ignition internal combustion engine with extended lean operation into low-load regions of engine operation. The present invention does not claim spark ignition and furthermore has limitations directed toward auto-ignition.

Applicants have amended claims 1, 10, 11, 18 and 22 to more particularly point out and distinctly claim the subject matter and to clearly demonstrate that Kaneko et al. fails to anticipate Applicants' invention under 35 U.S.C. 102(b). All amended claims now include "controlled auto-ignition" combustion process limitations to clearly distinguish the invention over the spark-ignition combustion process taught by Kaneko et al.

It is well settled that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W.L. Gore & Assocs. v. Garlock, Inc.*, 220 USPQ 303, 313 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

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And, "[a]bsence from the reference of any claimed element negates anticipation." *Row v. Dror*, 42 USPQ 2d 1550, 1553 (Fed. Cir. 1997) (quoting *Kloster Speedsteel AB v. Crucible, Inc.*, 230 USPQ 81, 84 (Fed. Cir. 1986)).

It is clear from the claims as presented herein that Kaneko et al. fail to anticipate in as much as the reference fails to disclose each element of the claims under consideration and such absence from the reference of the missing elements negates anticipation. Therefore, Kaneko et al. fail to anticipate all claims of the present invention and particularly fails to anticipate claims 1-6, 10-18 and 22-25 as asserted in the Office Action.

The remaining claims 7-9, 19-21 and 26-28 all depend – some with intervening claims - from one of independent claims 1 or 18 - and claim additional respective limitations thereto. The Office Action cites no prior art that would render these remaining claims obvious in view of Kaneko et al.

Based on the above, it is respectfully submitted that all claims are presently in condition for allowance, which allowance is respectfully solicited.

If the Examiner has any questions regarding the contents of the present response he may contact Applicants' attorney at the phone number appearing below.

Respectfully submitted,



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